

REMARKS

The present response amends the specification, abstract, drawings, and claims 1 and 6 in conformity with the following remarks. Claims 1-27 are pending in the captioned case.

Objections to the Drawings

Objections were lodged against the drawings for various informalities. In response thereto, the drawings have been amended to include reference numerals 12, 16 (Fig. 1), and 46 (Fig. 3). In addition, the designation "Prior Art" has been added to Figs. 1 and 2. Accordingly, Applicants request removal of these objections.

Objections to the Specification

An objection was lodged against the abstract for exceeding 150 words. In response thereto, the abstract has been amended to reduce the total number of words. Accordingly, Applicants request removal of this objection.

Objections were lodged against the disclosure for various informalities. In response thereto, the disclosure has been amended in accordance with the Examiner's suggestions. Accordingly, Applicants request removal of these objections.

Objections to the Claims

An objection was lodged against claim 6 for an informality. In response thereto, claim 6 has been amended in accordance with the Examiner's suggestion. Accordingly, Applicants request removal of this objection.

Section 102 Rejection

Claims 1-6, 11, 21, 26, and 27 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,274,926 to Iwasaki (hereinafter "Iwasaki '926"). In addition, claims 15-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,085,412 to Iwasaki (hereinafter "Iwasaki '412"). The standard for "anticipation" is one of fairly strict identity. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art of reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP 2131. Using these standards, Applicants submit the cited art fails to disclose each and every element of the currently pending claims, some distinctive features of which are set forth in more detail below.

Iwasaki '926 does not teach or suggest a plurality of conductors having a lateral surface that partially extends along a first outer planar surface of a molded resin, or a plurality of conductors that terminate in a single row substantially flush with a second outer planar surface that is perpendicular to the first outer planar surface. Present claim 1 defines a particular configuration for the plurality of conductors relative to a molded resin that encases an integrated circuit. Specifically, the integrated circuit is coupled to the first end of the plurality of conductors, and each of the plurality of conductors extends partially along a first outer planar surface of the molded resin. The end which opposes the first end is defined as the second end, and the second end of the conductors terminates in a single row flush with a second outer planar surface. The second outer planar surface is perpendicular to the first outer planar surface.

Details of the conductors having first and second ends, and the arrangement of a lateral surface of the conductors relative to the first and second outer planar surfaces of the molded resin can be found throughout the present specification; specifically, Figs. 6 and 9-11. Amendments to claim 1 are supported in the original description (Specification -- Figs. 6 and 9-11; pg. 14, lines 18-25; pg. 16, line 1 - pg. 17, line 11). Therefore, according to MPEP 2163.07, such amendments do not raise new matter. The claimed arrangement of a lateral (i.e., side) surface of a conductor that extends along an outer planar surface of a molded resin is nowhere suggested in Iwasaki '926. Moreover, Iwasaki '926 makes no mention that in addition to the side surface extending along a first outer surface, the conductor has an end which terminates flush with a second outer surface perpendicular to the first.

Iwasaki '926 makes clear that the side surface of conductors 5 do not extend along an outer surface of storage device 1 (Iwasaki '926 -- Figs. 1-2; col. 4, lines 26-46). In fact, Iwasaki '926 specifically requires conductors 5 be recessed and, by their very nature, cannot extend along an outer planar surface so they are exposed as in present claim 1 (Iwasaki '926 -- col. 4, lines 59-65). The recessed "female" surfaces 5a in Iwasaki '926, at the distal ends of lead 5b, are formed by mold 6 having a protrusion 6a that is "mated with a recessed surface 5a of each recessed shaped external connection terminal 5 . . ." (Iwasaki '926 -- col. 4, lines 62-63).

By recessing terminals 5, Iwasaki '926 specifically teaches away from an exposed side surface that extends partially along an outer planar surface of a memory card. The benefit of recessing the terminal 5 in Iwasaki '926 is such that a skilled artisan, upon reading Iwasaki '926, would not be lead to modify Iwasaki '926 in accordance with the present claim 1. Thus, not only does Iwasaki '926 fail to disclose the essential elements of claim 1, but any attempt to modify Iwasaki '926 would destroy its intended purpose. Accordingly, Iwasaki '926 cannot be properly combined with another reference to render present claim 1 obvious. *In re Gordon*, 733 F.2d. 900 (Fed. Cir. 1984); MPEP 2143.

In order to anticipate or render obvious present claim 1, Iwasaki '926 must not teach away from a conductor having a lateral surface extending along a first planar surface, but also must not teach away from the conductor terminating flush with a second outer surface perpendicular to the first outer surface. Iwasaki '926 specifically teaches away from both -- i.e., Iwasaki '926 teaches away from a conductor side surface extending along a first outer planar surface and teaches away from that conductor terminating flush with a second outer surface perpendicular to the first outer surface. Therefore, Applicants respectfully traverse this rejection.

Iwasaki '926 and '412 (collectively "Iwasaki") do not teach or suggest a conductor that extends along two planes (claim 15), or the step of coupling an integrated circuit to a conductor extending along two planes (claim 21). Both independent claims 15 and 21 recite a particular configuration of a conductor. The conductor can be part of a lead frame as described in claim 15 having first and second portions. This first portion is configured to receive the integrated circuit, and the second portion comprises the conductor. Specifically, the conductor is described in claim 15 as extending along a first plane co-planar to the first portion downward to a second plane. Claim 21 describes the steps of coupling an integrated circuit to a conductor that extends along two planes, followed by securing the conductor between a pair of mold housings and, thereafter, inserting resin between the pair of mold

housings to form a memory module. In both instances, however, the conductor takes on a particular form illustrated in, for example, Figs. 10 and 11 of the present specification. One benefit of extending the conductor in two planes is to eliminate the back-lapping or etching step shown in Fig. 9. (Specification -- pg. 16, lines 15-17: “[b]y employing a bend within conductor 88, no back-lapping or etching need take place on the hardened resin material 72 in order to expose an edge of conductor 88.”)

Instead of using a conductor that extends in two planes for the benefit described in the present specification, Iwasaki ‘926 specifically teaches a conductor 5 that extends along a single plane without any bends whatsoever (Iwasaki ‘926 -- Figs. 2-4). In particular, Iwasaki ‘926 describes memory device 2 placed on a metallic frame with lead 5b extending to a recessed terminal end (Iwasaki ‘926 -- col. 4, lines 56-59). Thus, Iwasaki ‘926 follows the conventional lead frame arrangement of having leads extending along a single plane, substantially co-planar with the paddle surface (first portion) on which an integrated circuit resides. Nowhere is there any suggestion in Iwasaki that a lead frame can employ a conductor that starts co-planar with the first portion (paddle) and is then bent downward to a second plane to form a surface on which the conductor is releasably secured against a receptor, as in claim 15. Moreover, there is no suggestion whatsoever that the conductor of Iwasaki can extend in more than one plane as in claims 15 and 21.

During the interview, Examiner Fureman explained that Iwasaki ‘412 illustrates in Fig. 7 a first portion 121 spaced from a second portion 122 (Iwasaki ‘412 -- Fig. 7). While Applicants are respectful of Examiner Fureman’s position, Iwasaki ‘412 describes metal frame 12 as having a bed section 121 and an electrode section 122, both made up of a metal plate (Iwasaki ‘412 -- col. 5, lines 48-51). Thus, Applicants assert that sections 121 and 122 are not spaced from each other, but instead form a unibody metal electrode made from a single metal plate. However, even if sections 121 and 122 were somehow considered to be spaced from each other, second section 122 does not fulfill the requirements of claim 15 against which Iwasaki ‘412 was cited. For example, claim 15 specifically requires that the second portion extend along a first plane co-planar to the first portion downward to a second plane. If the second portion is section 122 in Iwasaki ‘412, then second portion 122 cannot extend along two planes where the first plane is co-planar to first portion 121. To do so would require metal frame 12 of Iwasaki ‘412 to be completely reconfigured beyond that shown and described. Simply put, once a demarcation is made between section 121 and section 122, section 122 can no longer extend in any way, shape, or form partially co-planar to section 121 -- especially since sections 121 and 122 are considered to be a part of the unibody structure 12.

For at least the reasons set forth above, Applicants assert that independent claims 1, 15, and 21, as well as claims dependent therefrom, are not anticipated by the cited art nor can the cited art be properly combined with another reference to render the present claims obvious. Accordingly, Applicants respectfully request removal of this rejection.

Section 103 Rejection

Claims 7, 12, 14, 22, and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwasaki '926 in view of what the Office Action alleges is admitted prior art. In addition, claims 8-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwasaki '926 in view of U.S. Publication No. 2003/0071348 to Eguchi et al. (hereinafter "Eguchi"). Moreover, claims 13, 24, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwasaki '926 in view of U.S. Patent No. 6,431,456 to Nishizawa et al. (hereinafter "Nishizawa").

For at least the reasons stated above, Applicants assert that Iwasaki '926 cannot be properly combined with any other reference if, to do so, would destroy the intended purpose of Iwasaki '926. Applicants believe that the proposed combination set forth in the Office Action would, indeed, destroy the intent of Iwasaki '926 and the recessed coupling feature set forth therein. Moreover, even if combined, Iwasaki '926 makes no mention of a conductor lateral surface extending along an outer surface and terminating flush with another outer surface perpendicular to the first outer surface, much less a conductor that extends in two planes.

To establish a case of *prima facie* obviousness of a claimed invention, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Second, there must be a reasonable expectation of success. As stated in MPEP 2143.01, the fact that references can be hypothetically combined or modified is not sufficient to establish a *prima facie* case of obviousness. See *In re Mills*, 916 F.2d. 680 (Fed. Cir. 1990). Finally, the prior art references must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d. 981 (CCPA 1974); MPEP 2143.03, emphasis added. Specifically, "all words in a claim must be considered when judging the patentability of that claim against the prior art." *In re Wilson* 424 F.2d. 1382 (CCPA 1970). Using these standards, Applicants contend that the cited art fails to teach or suggest all features of the currently pending claims, and that the hypothetical combination cannot be properly made for at least the reasons stated herein.

Accordingly, Applicants assert that independent claims 1, 15, and 21, as well as claims dependent therefrom, are patentably distinct over the cited art. Therefore, Applicants respectfully request removal of this rejection.

CONCLUSION

The present amendment and response is believed to be a complete response to all issues raised in the Office Action mailed October 6, 2003. In view of the remarks traversing the rejections, Applicants assert that pending claims 1-27 are in condition for allowance. If the Examiner has any questions, comments or suggestions, the undersigned attorney earnestly requests a telephone conference.

No fees are required for filing this amendment; however, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Conley Rose, P.C. Deposit Account No. 03-2769/5732-00100.

Respectfully submitted,



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